



Global Development



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2008 USAID Development 2.0 Challenge submissions

HEALTH II

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21) Mobile phone messages for HIV Prevention for the deaf

Purpose: Education about what sexual behavior puts people at risk of HIV/AIDS with the goal of changing sexual behavior, practices and improving communication skills. This project focuses on the deaf as an underserved population of Tanzania.

Where has it worked: Morogoro urban district has well established structures for deaf Care such as schools and associations. This project intends to get implementation advice from these groups in order to conduct effective outreach.

Business model: The project will use a free mobile phone message service. Once initial equipment has been purchased, fund raising activities will assist in any replacement costs incurred due to damaged equipment.

Tech approach: HIV peer educators (PEs) disseminate HIV prevention tips to the deaf through a cell phone/tv messaging system. The project will train Deaf TOT for peer educators (PEs) and the technology system consists of cell phones connected to TV screens to place phone calls to the deaf.

Other Partners/Funding Sources: n/a

URL: n/a

22) Mobilizing Medical Records in Resource Poor Settings

Purpose:

Using Electronic Medical Records (EMR) enables health workers and patients to send data via SMS to a centralized system where physicians are notified of urgent health situations and conditions. Through this system, physicians and clinics can send medical advice back to the health worker or patient. The result is increased access to health services and a better documentation of medical records.

Where it has worked:

Similar projects have been implemented in Alto Cayma, Peru and Kigutu, Burundi

Business model:

From the submission: “This project requires only minimal seed funding to get off the ground. Once it is functional, it will be supported by the organizations that use it. These include health care organizations like Village Health Works and Health Bridges International, and open source communities like OpenMRS and OpenROSA.”

Tech approach:

The project will use SIM-base mobile phones because they are cheap, durable, prevalent, require less training and are less likely to make workers a target for theft/mugging (relative to smart phones). The project will use OpenMRS, an open source EMR system that plugs into the software used by this project. The project will be implemented at clinics that serve more than 65,000 people in Peru and Burundi.

Other Partners/Funding Sources: n/a

23) MocaMobile - Scalable Mobile Imaging For Global Health Delivery

Purpose:

MocaMobile is a remote medical imaging and diagnosis solution using mobile phones. This project uses mobile phones to add images, audio recordings and video, to a patient's medical record. Adding this component leverages an existing infrastructure an electronic medical record (EMR) system that delivers medical technology and decision support to underserved communities and health workers who do not have the needed infrastructure for training, hardware support and treatment compliance.

Where it has worked:

This particular system has not yet been implemented though a number of institutions and ASEAN centers have agreed to pilot the system.

Business model:

MocaMobile is being founded as a non-profit open source software foundation that can provide services for a fee. The financial model relies on a combination of donations and payment for software development and integration. Any incremental improvements in software development for a client, or developed by a user for their own use, is captured through the use of the GNU public license. This makes MocaMobile the centralized repository for scalable, expert reviewed code for mobile medical diagnostics. MocaMobile currently needs help acquiring partner organizations and NGO's for which to develop and scale the software for.

Tech approach:

The open source system provides instant end-to-end infrastructure for remote diagnosis by experts anywhere in the world who are tapped into the system. Packetization, a synchronization model, and multi-modal data transport allow MoCa to operate even in poor cellular coverage areas. Though the system is based on a mobile platform, it is designed for bandwidth constrained areas using WiFi and tethered uploads.

Other Partners/Funding Sources:

Partners include General Electric, CIDRZ, OpenMRS, The Next Billion Project, the ASEAN Center for Telehealth, Harvard Medical School, and six leading medical universities in Asia. In Asia, the following ASEAN Centers for E-Health and Telemedicine and universities have already signed on to use/pilot the system:

Universiti Sains Malaysia (Malaysia)

Institut dela Francophonie pour Medicine Tropicale (Laos)

University of the Philippines Manila (Philippines)

University of Gadjah Mada (Indonesia)

Ciputra Univerity (Indonesia)

Hanoi Medical University (Vietnam)

URL: <http://nextlab.mit.edu/fall2008/mobilediagnostics/>

Contact Info:

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24) mPedigree: Safer Drugs For Everyone

Purpose: MPedigree uses a scratch card method to reveal a single-use numeric code on drugs that users can text for free to a mobile shortcode. Users receive an instant message response that tells them if the drugs are legitimate or counterfeit at the point of purchase.

MPedigree's system serves consumers; government, law enforcement and foreign donors by providing statistics on drug quality as well as a system of accountability (anonymous notices are sent to relevant agencies on the location of where counterfeit drugs are regularly sold); and drug manufacturers by providing them credibility, helping them reclaim market shares and profitability that is lost to counterfeiters, and providing information that makes recalls quicker.

Where it has worked:

MPedigree conducted a technology trial to validate the concept among approximately 2,000 drug patrons in Ghana. MPedigree produced a half-hour documentary on fake drugs for their social marketing campaign, titled *If Symptoms Persist*. The movie showcases notable stakeholders in the local pharmaceutical ecosystem and has received repeated nation-wide telecast in Ghana. They have also started implementation in Nigeria around anti-malarials and antibiotics.

Business model:

MPedigree receives direct payments from genuine drug manufacturers who stand to gain from recovered market shares from the reduction and identification of counterfeiters. These manufacturers cover the costs of the coded labels and SMS messages. MPedigree actively seeks grants to co-finance consumer advocacy.

Tech approach:

MPedigree uses scratch code technology and an SMS short code system. They secured the SMS short code in the first ever acquisition of reverse-billed short code on all Ghanaian cellular networks.

Other Partners/Funding Sources:

The Coalition Against Counterfeiting and Illicit Trade (CACIT, Ghana) <http://bcacit.com/home/>

URL:

<http://mpedigree.org/home/>

<http://nextlab.mit.edu/fall2008/mobilediagnostics/>

Contact Info:

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25) MStockGuru

Purpose:

MStockGuru uses a mobile phone system to provide an inventory control service that asks pharmacists to periodically capture demand & inventory data. When pharmacists send in their information, MStockGuru sends texts messages about when they should restock and optimal quantities to order. The service also has an impact on the supply chain by helping balance supply and demand through optimal stocking practices and helping reduce the likelihood of expiry.

Where it has worked:

Not yet implemented

Business model:

Initial costs are in service setup, marketing, and training. MStockGuru takes a percentage of their customer's savings (medical stores and kiosks) in return based on "before & after" measurements determined in a pilot study that is recalibrated annually, it comes at virtually no cost to kiosks. Financial model simulations indicate a break-even scenario with revenues growing linearly with install base.

Additionally, the demand data collected by the system is valuable information for wholesalers, distributors and aid agencies. MStockGuru hopes that pharmaceutical vendors and retail kiosks can exchange the data for discounts or cash, empowering them within the supply chain.

Tech approach:

MStockGuru uses a mobile phone SMS. The project team has experience developing inventory and logistics algorithms and software. They currently need a software developer experienced in SMS mobile-phone platforms and 3G/SmartPhone.

Other Partners/Funding Sources:

n/a

URL:

http://www.lggi.org/mStockGuru_1_pager.pdf

26) Nehnwaa Child Survival Project

Purpose:

Liberia has the world's third highest maternal mortality ratio (994) and lifetime risk of maternal death is 1 in 12. Often the closest health facilities are 5 to 10 kilometers away and cars are not available for transportation.

The project trains and deploys community health workers (CHW), trained traditional midwives (TTM), and an obstetric emergency (OE) response system. The project will establish a communication network and emergency obstetric response system utilizing cell phones, renewable energy technology and 4x4 response vehicles to ensure clean and safe infant delivery by skilled attendants for women living in rural Nimba County, Liberia.

Where it has worked:

The project will serve as a pilot for the Liberia Ministry of Health and Social Welfare (MOH&SW) as it rebuilds the Liberian health infrastructure. If it is successful, the project will be rolled out across the country in partnership with the country's main cell phone service providers, Lonestar and Cellcom.

Business model:

USAID awarded the project \$1.25 million in June 2008. This funding, along with contributions from the Free Play Foundation, will sustain the pilot through 2013.

Tech approach:

The system utilizes Freeplay Energy's solar/hand-cranked cell phone charger cell phones, a device which solves the problem of lack of electricity in the villages that has impeded cell phone penetration. GUMH staff responds with a 4WD all-terrain vehicle (for patient transport to GUMH) or motorcycle (for home-based treatment) and/or emergency coaching via cell phone. GUMH staffs the system 24/7 system.

Other Partners/Funding Sources:

Curamericas Global launched the USAID-funded Nehnwaa Child Survival Project with in-country partner Ganta United Methodist Hospital (GUMH) in northcentral Liberia. Curamericas Global staff helped design the GUMH Project. USAID awarded \$1.25 million and contributions are made by Free Play Foundation. Curamericas Global's Child Survival projects in Bolivia, Haiti, Mexico and Guatemala have consistently met or exceeded project goals, cumulatively serving over 350,000 beneficiaries, and managing \$6.7 million of USAID funds since 1987 without audit exceptions or questioned costs.

URL:

n/a

27) Networking In the Sierra Tarahumara

Purpose: The project will promote the health care and education to the Tarahumara Indians of the Sierra Madre (a group of people scattered in 200 square miles of a rugged, vast canyon system). Radio communication will be used to equip medical transport, health workers in villages and hospitals, and radio units will have increased contact with local law enforcement officials.

Where it has worked:

The hospital opened its doors in January of 2000 and in 2007 the community health program intensified efforts, with regular village visits. At this time, an aviation program for air transport and a midwifery program began. Installation of first radio system was completed in February of 2008.

Business model: The system requires: A Permit: \$1,000.00; Tower w/solar: \$6,000.00; Village radio w/solar: \$1,800.00; Two vehicle units: \$600.00; Solar panel: \$700.00. Additional funds needed for: Solar panels - \$1400; 60-watt vehicle radio - \$300; An airplane radio - \$300; Village radio - \$300; Additional remote units as health workers increase - \$1800 each.

Tech approach: Solar powered radio tower near hospital will reach radio units in/near remote villages. 60-watt radios in an ambulance and community health vehicle for more reliable, wider network reach.

Other Partners/Funding Sources: Donations are accepted through their website. Other funding sources are unclear.

URL: <http://www.mexicomedical.org/>

28) Pariah News: Where Citizen Media Enables AIDS Treatment Access

Purpose: Pariah News will be a citizen media and crowdsourcing enabled project by and for sex workers based in Madagascar to ensure protection of their rights, better access to AIDS treatment and prevention practices, empowerment and AIDS related public health data collection. The project seeks to teach sex workers computer skills and how to use citizen media tools so they can tell their own story.

Where it has worked: Variations of the system have been implemented in Madagascar.

Business model: There is a dearth of public health data about AIDS in Madagascar and the projects plans to market their information to health agencies on a “pay-per-request” model for specific/desired data.

Tech approach: The system pushes relevant news and health information through SMS and pulls information that enables sex workers to report their health status anonymously and report cases of violence without waiting for an official police report. The project utilizes SMS messages, internet radio and blogs. Sex workers participating in the project will SMS status and incident reporting via Ushahidi platform. FOKO is already collaborating with Ushahidi for their project. We would also consider other forms of crowdsourcing.

Other Partners/Funding Sources: Pariah News is a joint project between FOKO Madagascar, a Rising Voices (funded by the Knight Foundation) grantee that promotes the use of citizen media to promote social and environmental changes and FIMIZORE, a NGO based in Antananarivo, Madagascar that strives for the protection of sex workers and men who have sex with men's rights (MSMs). FIMIZORE was one recipient of the UNAIDS 2008 Red Ribbon award.

URL: <http://fimizore.wordpress.com/>

29) Pregnancy Infant Protection Program (PIPP) Using Small Media Technology

Purpose: This project has a network of 68,000 digital voice players (originally used in a campaign commissioned by the U.S. State Department and the Afghanistan Independent Election Commission in the Afghan 2004/05 elections) that will reach 4 million illiterate Afghans, providing them with maternal infant care information created for women in rural hard to reach areas. The Pregnancy Infant Protection Program (PIPP) content is produced with indigenous sources, including the voices of key provincial and religious leaders so it is linguistically accurate, culturally engaging and trusted.

Where it has worked: The results of the VFH Afghan election campaign resulted in 20% higher voter turnout in the provinces where VFH deployed its technology. In a 2005 AIDS campaign in Africa, the VFH approach to AIDS education was found to be 7 times more effective at a fraction of the cost per listener. Participants said the VFH voice player was more preferred to radio (93.6%), pamphlets/newspapers (95.9%), and television (92.4%) as a means of HIV/AIDS education, and 91.8% said the technology was easy to use.

Business model: This project utilizes an established indigenous network of Afghan partners and an investment in technology of US \$5 million that is already in place in two-thirds of the country.

Tech approach: Hand-held Voice Player and Chip utilizes advanced audio compression technology that is equivalent to MP3 players. It has a 10x cost advantage per megabyte and the ability to hold over 500 hours of content. The DSP speech compression algorithms create encrypted files that can only be decoded by our Player. Rechargeable batteries and solar charger

are used and therefore have no ownership cost and no commercial value. A question button explains how to use and navigate through the topics and sub-topics.

Other Partners/Funding Sources: Voice For Humanity

URL: <http://voiceforhumanity.org/>

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30) Mobile Mother Care

Purpose: Health workers in Bangladesh will solicit pregnant women to participate in the project's health care database, where they can send SMS messages with their health updates. The system then pushes out SMS and voice messages with reminders and relevant health information based on an individual's stage of pregnancy.

Where it has worked: The project team has previous experience developing SMS and Voice based solutions for mobile operators in Bangladesh

Business model: not specified

Tech approach: SMS system and Interactive Voice Response System (IVR) in Bangla (native language).

Other Partners/Funding Sources: not specified

URL: n/a

Contact Info:

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31) ROBO Calls for Health – A Developing Country Proposal

Purpose: Through phone calls and/or SMS text messaging patients would be reminded on their appointments and/or home treatments.

Where it has worked: Not Yet Implemented.

Business model: Not Specified.

Tech approach: SMS, voice and database.

Other Partners/Funding Sources: None.

Project URL: None

Contact Info:

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32) Sex INFO International – mHealth Education, Awareness and Referral

Purpose: SEXINFO is an education, awareness, and referral services accessed by simple SMS.

Where it has worked: United States of America, initial evaluation for international expansion conducted.

Business model: Users pay for SMS text costs, foundational support and partnerships with technology and health actors in place.

Tech approach: SMS text service

Other Partners/ Funding Sources HipCricket, ADIQ

Project URL: <http://sexttext.org>, <http://www.isis-inc.org>

Contact Info:

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33) SMS4AIDS program

Purpose: The SMS4AIDS program will send tailored SMS reminders for AIDS medication to South Africa patients.

Where it has worked: A pilot of SMS4AIDS was recently tested at a Johannesburg AIDS clinic by the Reproductive Health & HIV Research Unit (RHRU).

Business model: The cost per SMS is under 3¢ to users and no computer programming is required. SMS4AIDS does not have a revenue generation model. It is instead designed to generate evidence on a health behavior intervention for AIDS treatment

Tech approach: Bulk SMS messaging service.

Other Partners/Funding Sources: Reproductive Health and HIV Research Unit (RHRU)
South Africa

34) SocialTxt

Purpose: The SocialTxt messaging platform uses the 120 "unused" characters of a 'please call me' (PCM) message to better access information to make better decisions about their health.

Where it has worked: In partnership with leading network provider MTN, SocialTxt leverages approximately 1 million HIV-AIDS-messages each day to link South Africans to the National AIDS Helpline.

Business model: Partnership with NGOs, low maintenance cost and support from National Aids Helpline.

Tech approach: SocialTxt is an open-source SMS tool.

Other Partners/Funding Sources: “Project Masiluleke”, National AIDS Help Line MTN

Project URL: <http://praeckeltfoundation.org/products-and-services/socialtxt>

35) Solar Powered, Evaporative Refrigerators for Remote Storage of Biologics

Purpose: The construction of refrigerators based on solar-assisted evaporative cooling. This provides mobile, remote plug-less refrigeration for biologics and perishable medicines/ vaccines.

Where it has worked: An academic design team has developed reasonable coefficients of performance for evaporative cooling systems.

Business model: The business model is based on micro-franchising to incentivize local entrepreneurs in developing countries to support refrigerator building and maintenance. The micro-franchise will also focus on distribution logistics to remote health clinics, technical support training.

Tech approach: Solar evaporative cooling systems use the sun to passively heat and desorb convection fluids that evaporate and expand through a check valve, creating the cooling process. The idea is to cool in the daytime and recharge during the night. The amount of heat transfer fluid available to vaporize regulates the cooling capacity.

URL: <http://sites.google.com/a/umich.edu/m-heal>

Other Partners/Funding Sources: M-Heal, University of Michigan, Wireless Microelectronics Center at the University of Michigan, Global REACH (Research, Education, and Collaboration in Health)

36) TxtAlert

Purpose: Txt Alert is an open source mobile technology tool that supports both anti-retroviral (ART) patients and health care providers by reminding patients of upcoming clinic visits and tracking for providers about appointments met and missed and medicine pick-up.

Where it has worked: SocialTxt is currently being used in a HIV campaign called “Project Masiluke” in South Africa. TxtAlert has been successfully piloted at right to Care’s Themba Lethu clinic, in Johannesburg, since August, 2007

Business model: This open source tool is freely available and self-sustainable because it does not require huge maintenance costs. It can be adapted to suit unique partner needs and the only real cost of using TxtAlert is messaging.

Tech approach: Solar evaporative cooling systems use the sun to passively heat and desorb convection fluids that evaporate and expand through a check valve, creating the cooling process. The idea is to cool in the daytime and recharge during the night. The amount of heat transfer fluid available to vaporize regulates the cooling capacity.

URL: <http://praektelfoundation.org/products-and-services/txtalert>

Other Partners/Funding Sources: Right to Care, “Project Masiluleke”

37) Virtual Consumers Anonymous (VCA – Consumer 911)

Purpose: A global virtual alliance and exchange-point using mobile phone and web based methods for product risk information in order to alert consumers about counterfeit, substandard, and dangerous consumables. Web 2.0 and mobile 2.0 functionalities will permit every consumer with access to a cell phone or the internet to verify the efficacy, toxicity, originality, and origins of any product.

Where it has worked: mPedigree project in Ghana has aimed to create an anti-counterfeiting platform in Africa on a territory-by-territory basis.

Business model: not specified

Tech approach: Use the wiki model to catalogue and disseminate information about a great range of consumables to users around the world. A grading system involving the world’s regulatory agencies will continually improve upon the integrity of the data. Manufacturers who agree to participate in the scheme are offered web-based tools to generate unique, one-time codes for embossment on their products. When consumers buy these products, they are able to verify the authenticity of the product by sending a free text (SMS) message to a national 4-digit number. Requires pacts with the government and telecom operators.

URL: none

Other Partners/Funding Sources: mPedigree

Contact Info:

Bright B. Simons

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38) Water Technology Assistant – Cell phones supporting Access to Clean Water

Purpose: The Water Technology Assistant (WTA) is a cell phone application designed to support drinking water and sanitation projects in the field. The WTA uses cell phones to link water and sanitation projects to donors by making progress online.

Where it has worked: The Akvo core system is being implemented by 46 partners involved in field projects worth around 450,000 Euros around the world..

Business model: not specified

Tech approach: SMS text message updates, video clips and photos. Uses existing online resources reformatted and rewritten for small screens.

URL: www.akvo.org

Other Partners/Funding Sources:

Schokland Funds, a Dutch government fund